

WHAT IS CLAIMED IS:

1. A method for therapeutically applying NO comprising combining a nitrite salt, a biocompatible reductant and an acid with a pKa between about 1 and about 4 in a medium and topically applying said combination to a body site.)

2. A method for topical delivery of nitric oxide (NO) comprising mixing a powdered nitrite salt with a powdered reductant and an acid having a pKa between about 1 and about 4 in a diffusion-inhibiting topically applicable medium and topically applying an effective amount of said mixture to a body site.

3. The method of claim 1 or 2 where the reductant is an ascorbate salt, an erythroate or α -tocopherol.

4. The method of claim 1 or 2 where the reductant is ascorbic acid.

5. The method of claim 1 or 2 where the acid is an organic acid.

6. The method of claim 1 or 2 where the acid is maleic acid.

7. The method of claim 1 or 2 where the acid is an inorganic acid.

8. The method of claim 1 or 2 where the nitrite salt is an inorganic salt.

9. The method of claim 1 or 2 where the nitrite salt is sodium nitrite.

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10. The method of claim 1 or 2 where the medium is an aqueous gel.

10 11. The method of claim 1 or 2 where the medium is an organic salve.

15 12. A topically applicable ointment for controlled NO delivery comprising a nitrite salt, a reductant and an acid with a pKa between about 1 and about 4 in a medium sufficiently viscous to inhibit diffusion, permit slow NO release and facilitate topical application.

20 13. The ointment of claim 12 where the reductant is ascorbic acid, an ascorbate salt, an erythroate or α -tocopherol.

14. The ointment of claim 12 where the reductant is ascorbic acid.

25 15. The ointment of claim 12 where the acid is an organic acid.

16. The ointment of claim 12 where the acid is maleic acid.

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17. The ointment of claim 12 where the acid is an inorganic acid.
18. The ointment of claim 12 where the nitrite salt is an inorganic salt.
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19. The ointment of claim 12 where the nitrite salt is sodium nitrite.
20. The ointment of claim 12 where the medium is an aqueous gel.
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21. The ointment of claim 12 where the medium is an organic salve.
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22. A composition for generating and controlling the release rate of NO for topical applications comprising a first aqueous gel and a second aqueous gel, the first gel comprising a nitrite salt, and the second gel comprising an acid having a pKa between about 1 and about 4 and at least one of the first and second gel comprising a reductant.
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- ¹³ 23. The composition of claim ¹² 22 where the reductant is ascorbic acid, an ascorbate salt, an erythroate or α -tocopherol.

- ¹⁴ 24. The composition of claim ¹² 22 where the reductant is ascorbic acid.

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Sub 13
25. The composition of claim 22 where the acid is an organic acid.

5 *16*
26. The composition of claim *12* 22 where the acid is maleic acid.

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27. The composition of claim *12* 22 where the acid is an inorganic acid.

10 *18*
28. The composition of claim *12* 22 where the nitrite salt is an inorganic salt.

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29. The composition of claim *12* 22 where the nitrite salt is sodium nitrite.

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20 30. A method for delivering the two gels of the composition of claim 22 from a single container with two separate chambers by forcing them through a nozzle with a hole for each chamber.

25 31. A method for topical application of the gels of the composition of claim 22 in layers, with the nitrite-containing gel layer being in contact with the skin, the second gel layer being separated from the first by an impermeable plastic or metal foil until just before use, when the plastic or foil is removed, and the gel layers are topically applied.

30 32. A method in which the ointment of claim 12 or the two gels of the composition of claim 22 are applied on the skin through an interposed gas-permeable membrane for lessening any skin irritation.